

tubes of currency from an associated column. A plurality of sensors, one for each column, are provided, each for sensing quantity of tubes in the associated column. A control system is operatively associated with the sensors for determining quantity of currency in the drawer.

It appears from the discussion of the various references that the terminology in the pending claims is misinterpreted regarding the phrase "vertical tubes of currency". The application describes this as referring to tubes, e.g., rolls, that hold a quantity of currency such as coins, as is well known. In particular, the claims refer to "tubes of currency". As such, the tubes of currency are in the nature of a workpiece to be acted on by the claimed system, as is apparent from each of the claims.

Applicants traverse the rejection of claims 1 and 2 as obvious over Perkitny U.S. Patent No. 6,638,157 in view of Ishida et al. U.S. Patent No. 6,261,169 and further in view of Levasseur U.S. Patent No. 5,092,816.

Independent claim 1 specifies a coin dispensing system comprising a drawer for supporting vertical tubes of currency. Means are provided for withdrawing tubes of currency from the drawer. A sensor senses quantity of tubes in the drawer. A control system is operatively associated with the sensor for determining quantity of currency in the drawer.

None of the references, alone or in combination, relates to a coin dispensing system used with tubes of currency. More particularly, the claims do not disclose or suggest a drawer for supporting tubes of currency, or means for withdrawing tubes of currency from the drawer, or a sensor for sensing quantity of tubes in the drawer. Therefore, no combination of the references results in the invention.

Perkitny is directed to a coin sorter. The sorter includes tubes 36 for receiving individual coins to be sorted. These tubes are fixed in the sorter and are not adapted to otherwise store or hold currency. While Perkitny does disclose vertical tubes, it does not disclose a drawer supporting “tubes of currency” in a vertical orientation, as contemplated by the claims. Nor does it disclose or suggest any means for withdrawing “tubes of currency” from the drawer. Nor is there any disclosure or suggestion of means for sensing quantity of tubes in the drawer. Nor would any such sensor serve any purpose. The purpose of the device in Perkitny is to sort coins into a fixed number of tubes. Such a sensor would serve no purpose. Finally, Perkitny does not disclose or suggest a control system determining quantity of currency in the drawer.

Ishida et al. is directed to a coin processing device which houses a coin accommodating means made up of integral coin tubes 5, 6, 7, 8 and 11. This device is used for sorting coins and subsequently dispensing coins for change. While the device uses tubes, the tubes are fixed and hold individual coins. It is not directed to working with “tubes of currency” as a workpiece, but rather coins as a workpiece.

Particularly, Ishida et al. does not disclose or suggest a drawer for supporting tubes of currency, vertically. Instead, it discloses the fixed coin accommodating mans in which coin tubes can receive individual coins. It does not disclose or suggest means for withdrawing the tubes from the drawer. Such means would serve no purpose as the dispensing relates to individual coins, not tubes of currency. Contrary to the statements in the action, Ishida et al. does not disclose or suggest sensing quantity of tubes in the drawer. Instead, the controller determines the type of tubes in the drawer, rather than the quantity of tubes in the drawer.

Levasseur is directed to a fixed apparatus including vertical tubes that receive individual coins. As with the other references, the tubes are fixed and the apparatus is directed to receiving individual coins, with the coins acting as the workpiece, rather than tubes of currency, as in the claims.

Even if the references are combined, the combination does not result in the claimed invention, as none of the references disclose or suggest use of “tubes of currency” as a workpiece, but rather use individual coins as a workpiece. Moreover, the action does not cite any teaching in any of the references of any means for withdrawing “tubes of currency” from the drawer. While the references might disclose means for withdrawing individual coin from a tube, there is no disclosure or suggestion of any means for withdrawing tubes of currency from a drawer.

Because the references do not disclose or suggest the combination of claim 1, the obviousness rejection is improper.

Claim 2 depends from claim 1 and specifies that the drawer comprises a horizontal bottom wall connected to opposite side walls, and a plurality of spaced dividers between the opposite side walls defining a plurality of columns for receiving vertical tubes of currency. While the references may disclose bottom walls, side walls and dividers, this structure itself defines tubes which are adapted to receive individual coins. It does not define structure adapted to receive “tubes of currency” in any orientation, let alone a vertical orientation, as specified in the claims.

For the above reasons, claims 1 and 2 are believed allowable and withdrawal of the rejection is requested.

Applicant traverses the rejection of claims 1-20 as obvious over Collier et al. U.S. Patent No. 6,302,249 in view of Perkitny, Ishida et al. and Levasseur.

Independent claim 1 is discussed above. The deficiencies with respect to Perkitny, Ishida et al. and Levasseur are discussed above. Collier et al. is directed to a dispenser for rolled coins, i.e., tubes of coins. Particularly, Collier et al. discloses a vertical stack for storing rolls of coins. While the rows are vertical, the rolls, i.e., tubes, are not. they are horizontal, as is apparent in Fig. 1. In this sense, the rolled coin dispenser of Collier et al. is akin to that described as background at pages 1 and 2 of the present application.

More particularly, Collier et al. does not disclose a drawer for supporting tubes of currency. Nor does it disclose any apparatus for supporting vertical tubes of currency. Nor does it disclose or suggest sensing quantity of tubes at all, let alone in a drawer, or determining quantity of currency, let alone currency in a drawer.

The three secondary references are not properly combined with Collier et al. Collier et al. is directed to a dispenser for dispensing rolled coins, i.e, tubes of coins. The other references all relate to sorting and dispensing of individual coins, not rolled coins. As such, the combination is improper. Moreover, to suggest that the apparatus of Collier et al. could be used with the drawer 30 of Perkitny is not supportable. Perkitny discloses a relatively small drawer that holds five tubes for receiving individual coins. The device of Collier et al. is adapted for supporting large volume of coins, such as in banks or casinos, see col. 1, lines 12-15.

Because the references are not properly combinable, the rejection of claim 1 and its dependent claims 2-6 is improper.

Independent claim 7 is directed to a coin dispensing system comprising a drawer including a bottom wall connected to opposite side walls. A plurality of spaced dividers between the opposite side walls define a plurality of columns for supporting vertical tubes of currency. A plurality of dispensers are provided, one for each column, each for withdrawing tubes of currency from an associated column. A plurality of sensors, one for each column, sends quantity of tubes in an associated column. A control system is operatively associated with the sensors for determining quantity of currency in the drawer.

Claim 7 is not obvious for the same reasons discussed above relative to claim 1. In particular, none of the references, alone or in combination, disclose a drawer supporting vertical tubes of currency. Nor is there any disclosure of a plurality of dispensers, one for each column, each for withdrawing tubes of currency from a column. Nor is there any disclosure of a sensor for each column sensing quantity of tubes in a column.

While Collier et al. is related to a dispenser, there is only a single dispenser element. There is not a plurality of dispensers, one for each column.

For the above reasons, claim 7 and its dependent claims 8-15 are not obvious.

Independent claim 16 specifies a coin dispensing system comprising a drawer including a bottom wall connected to opposite side walls, and a plurality of spaced dividers between the opposite side walls defining a plurality of columns for supporting vertical tubes of currency. A plurality of pushing plates, one for each column, and biasing means bias each

pushing plate forward. There is a magnet on each of the pushing plates. A plurality of magnet operated switches spaced along each column sense position of the associated magnet. A plurality of impedance networks, one for each column, are each electrically connected to the plurality of magnet operated switches for the associated column, so that voltage of the impedance network varies with position of the associated pushing plate. A control system is operatively associated with the impedance network for determining quantity of currency in the drawer.

As noted above, none of the cited references, alone or in any proper combination, results in a drawer defining a plurality of columns supporting tubes of currency in vertical orientation. Nor do any disclose pushing plates in each column with a magnet on each pushing plate used with magnet operated switches and an impedance network and control system for determining quantity of currency in the drawer. The action does not attempt to reference any such structure in any of the references. The action effectively ignores half of the claim by simply referring to “official notice”. Particularly, the action takes official notice that “it is well-known to locate the position of an element connected to a driving rotating member such as a motor by sensing encoder counts corresponding to limit linear motion. Note that such an encoder works with relay switches or the functional equivalent”. The claim is not directed to driving any rotating member. Thus, it is not apparent how the official notice has any relevance to the claimed invention which uses an impedance network, not an encoder counter.

MPEP §2144.03 specifies when “common knowledge” or the like can be relied on. The section notes that rejections based on common knowledge should be judiciously applied.

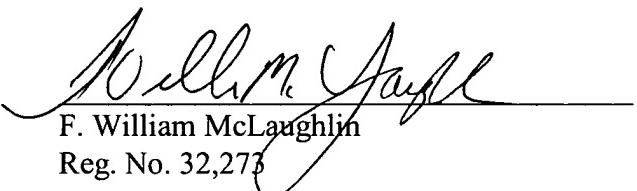
Moreover, it should only be used to fill gaps in an insubstantial manner. Applying it to essentially half the claim is not filling in the gaps in an insubstantial manner.

For these reasons, and those specified above, claim 16 and its dependent claims 17-20 are not obvious.

For the above reasons, claims 1-20 are believed allowable and withdrawal of the rejection is requested.

Reconsideration of the application and allowance and passage to issue are requested.

Respectfully submitted,


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